

**AMENDMENTS TO THE CLAIMS:**

The listing of claims will replace all prior versions, and listings, of claims in the application.

**Listings of Claims:**

1. **(Currently Amended)** A mismatch detector comprising:
  - a directional device comprising a circulator adapted to transmit signals to an antenna and receive reflected signals from the antenna, the output of the circulator coupled to a slow wave structure;
  - a detector coupled to a port on the directional device and configured to measure power of the reflected signal;
  - a second detector coupled to a port on the directional device and configured to measure power of the transmit signal; and
  - a processor configured to read the measured power of the transmit signal and the measured power of the reflected signal and to generate a first control signal configured to control a matching network and a second control signal configured to control an amplifier, wherein the processor is configured to generate both the first and second control signals based on the measured power of the transmit signal and the measured power of the reflected signal.
- 2-5. **(Canceled)**
6. **(Currently Amended)** The mismatch detector of claim [[5]] 1 wherein the slow wave structure is coupled to multiple power detectors.
7. **(Original)** The mismatch detector of claim 6 wherein the multiple power detectors are configured to measure magnitude and phase of a reflected signal.

8. **(Previously Presented)** A wireless electronic device comprising:

a matching circuit;

a mismatch detector coupled with the matching circuit, the mismatch detector including:

a directional device adapted to transmit signals to an antenna and receive reflected signals from the antenna,

a detector coupled to a port on the directional device and configured to measure power of the reflected signal,

a second detector coupled to a port on the directional device and configured to measure power of the transmit signal;

a processor configured to read the measured power of the transmit signal and the measured power of the reflected signal and to generate a first control signal configured to control a matching network and a second control signal configured to control an amplifier, wherein the processor is configured to generate both the first and second control signals based on the measured power of the transmit signal and the measured power of the reflected signal;

an antenna coupled to the matching circuit;

a transceiver comprising the amplifier coupled to the antenna through the matching circuit;

a control block coupled to the transceiver and adapted to control the transceiver;

a memory coupled to the control block and configured to store data for the control block;

an input device coupled to the control block and configured to receive input from a user; and

a power source coupled to the control block and configured to supply power to the control block.

9. **(Original)** The wireless device of claim 8 wherein the wireless device is a mobile wireless device.

10. **(Original)** The wireless device of claim 8 wherein the wireless device is a base station.

11. **(Original)** The wireless device of claim 8 wherein the wireless device is multiple wireless devices forming a wireless communication system.

12. **(Original)** The wireless system of claim 11 wherein the multiple wireless devices include at least one base station.

13. **(Original)** The wireless system of claim 11 wherein the multiple wireless devices include at least one mobile wireless device.

14-16. **(Canceled)**